

Application No. 10/782,096  
Amendment Dated June 2, 2006  
Reply to Office Action of March 3, 2006  
REPLACEMENT SHEET

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axmi009 -----MNSYKNKNEYEMLDALRINSNMSNCYPRYPLAKDPQMTMRNTNYKEWLNMCDSN 54
cry1Aa -----MDNNPNINECIPYN---CLSNPEVEVLGG----- 26
cry1Ac -----MDNNPNINECIPYN---CLSNPEVEVLGG----- 26
cry1Ca -----MEEN-NQNQCIPYN---CLSNPEEVLDDG----- 25
cry1Ia -----MKLKNQDKHQSFSSNAKVDKISTDS---LKNETDIELQNINHEDCLKMSEYE 49
cry3Aa1 MIRKGGKMNPNNRSEHDTIKTTENNEVPNTNHVQYPLAETPNPTLEDLNYKEFLRMTADN 60
cry3Ba MIRMGGKMNPNNRSEYDTIKVTPNSELPNTNHNQYPLADNPSTLEELNYKEFLRMTADN 60
cry3Bb -----MNPNNRSEHDTIKVTPNSELQTNHNQYPLADNPSTLEELNYKEFLRMTEDS 52
cry4Aa -----MNPYQNKNEYETLNASQKKLNISNNYTRYPIENSPKQLLQSTNYKDWLNMCCQN 54
cry6Aa -----MIIDSKTTLPRHSLIHTIKLNSNKKYGPDMTNGNQFIISKQE----- 43
cry7Aa -----MNLNNLDGYEDSNRTLNNSLNYP---TQKALSPSLKNMNYQDFLSITERE 47
cry8Aa -----MSPNNQNEYEIIDATPSTSVSSDSNRYPFANEPTDALQNMNYKDYLKMSGGE 52
cry10Aa -----MNPYQNKNEYEIFNAPSNGFSKSNYSRYPLANKPNQPLKNTNYKDWLNVCCQN 54
cry16Aa -----MHYVGNRNEYDILNASSNDSNMSNTYPRYPLANPQQDLMQNTNYKDWLNVCEGY 54
cry19Ba -----MNSYQNKNEYEILDAKRNTHMSNCPKYPLANDPQMYLRNTHYKDWINMCEEA 54
cry24Aa -----MNQYQNKNEYEILESSQNMMNMPNRYP---FADDPNAVMMKNGNYKDWVNECEG- 50
cry25Aa -----MNPYQNKSECEILNAPLNNINMPNRYP---FANDPNAVMMKNGNYKDWLNECDG- 50
cry40Aa1 -----NSYENKNEYEILESSNNTNMPNRYP---FANDRDMSTMS-----FNDCQG- 43

axmi009 TQFIGDISTYSSPEAALSVRDAVLGTGINSVGTILSNLGVPLASQSFGIISRILGILWAGP 114
cry1Aa -----ERIETGYTPIDISLSLTQFLLSEF-VPGAGFVLGLVDIIWGIFGPSQ 72
cry1Ac -----ERIETGYTPIDISLSLTQFLLSEF-VPGAGFVLGLVDIIWGIFGPSQ 72
cry1Ca -----ERISTGNSSIDISLSLVQFLVSNF-VPGGGFLVGLIDFVWGIVGPSQ 71
cry1Ia N-----VEPFVSASTIQTGIGIAGKILGTLGVPPFAGQVASLYSFILGELWP-K 96
cry3Aa1 NT-----EALDSSTTKDVIQKGISVVGDLGVLGVFPFGGALVSFYTNFLNTIWPSE 111
cry3Ba ST-----EVLDSSTVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNAIWPSP 111
cry3Bb ST-----EVLDNSTVKDAVGTGISVVGQILGVVGVPFAGALTSFYQSFLNTIWPSP 103
cry4Aa QQYG-----GDFETFIDSSELSAYTIVVGTVLTFGFGFTPLGLALIGFGLIPVLFPA 107
cry6Aa -----WATIGAYIQTGLGLPVNEQQRLRTHVNLSQDISIPSDFSQLYDVYCSN 90
cry7Aa QP-----EALASGNTAINTVSVTGATLSALGVPGASFITNFYLRKIAGLLWPN 96
cry8Aa NPELF-----GNPETFISSTIQTGIGIVGRILGALGVPPFASQIASFYSFIVGQLWPSK 106
cry10Aa QQYGNNNA---GNFASSETIVGVSAIIIVGTMLGAFAAP-VLAAGIISFGTLLPIFWQG 109
cry16Aa HIEN-----PREASVRAGLGKGLGIVSTIVGFFGGSIILDTIGLFYQISELLWPED 105
cry19Ba SYAS-----SGPSQL---FKVGGSIIVAKILG-----MPEVGPILLSWMVSLFWPTI 97
cry24Aa -----SNISPSPAAAITSKIVSIVLKTAKAVASSLADSIKSSLGISKITIT 96
cry25Aa -----ITPSIFGTLGLVASIVISTINLATSPSIGDAFALVSSIGEYWPETK 96
cry40Aa1 -----ISWDEIWESAETITSIGIDLIEFLMEPSLGGINTLFSIIGKLIPTN 89

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axmi009 DP----FEALMVLVEELIKKSIDQVRRENALRELEG--LQGIMRLYQTRLQAWLVNKN-- 166
cry1Aa -----WDAFPVQIEQLINQRIEFARNQAISRLEG--LSNLYQIYAESFREWEADPT-- 122
cry1Ac -----WDAFLVQIEQLINQRIEFARNQAISRLEG--LSNLYQIYAESFREWEADPT-- 122
cry1Ca -----WDAFLVQIEQLINERIAEFARNAAIANLEG--LGNNFNIIYVEAFKEWEEDPN-- 121
cry1Ia GK--NQWEIFMEHVVEEIIINQKISTYARNKALTDLKG--LGDALAVYHDSLESWVGNRN-- 150
cry3Aa1 ---DPWKAFMEQVEALMDQKIADYAKNKALAELOG--LQNNVEDYVSALSSWQKNPVS- 164
cry3Ba A---DPWKAFMAQVEVLIDKKIEEYAKSKALAELOG--LQNNFEDYVNALDSWKKAPVN- 165
cry3Bb A---DPWKAFMAQVEVLIDKKIEEYAKSKALAELOG--LQNNFEDYVNALDSWKKTPLS- 157
cry4Aa QDQSNWSDFITQTKNIIKKEIASTYISNANKILNR--SFNVISTYHNLKTNWENN- 162
cry6Aa KTSAEWNNKNLYPLIISANDIASYGFVKVAGDPSIK--KDYGFKKLQDELNIVDNNS-- 146
cry7Aa GK--I-WDEFMTEVEALIDQKIEEYVRNKAIAELDG--LGSALDKYQKALADWLKQD-- 149
cry8Aa SV--DIWGEIMERVEELVDQKIEKYVKDKALAELOG--LGNALDVYQQSLEDWLENRN-- 160
cry10Aa SDPANVWQDLLNIGG-RPIQEIDKNIINVLTIVTP--IKNQLDKYQEFDKWEPA-- 163
cry16Aa DTQQYTQWQIMNHVEDLIDKRITVIRGNAIRTLAD--LQGVVDDYNNWLKWKDDPK-- 161
cry19Ba EEKNTVWEDMIKYVANLLKQELTNDTLNRATSNLSG--LNESLNIYNRALAAWKQKN-- 153
cry24Aa EN--NVSQVSMVQVHQIINRRIQETILDGEG--SLNGLVAIYNRDYLGAEAWN-- 149
cry25Aa TS----FPLSVADVNRILREALDQNAINRATGKFG--LMDTYNTVYLNKLDQWYDTRIPA 151
cry40Aa1 HQ--SVSALSICDLLSIIIRKEVADSVLSDAICRFLDGKLNKYREYYPYLEAWLKDGP 147
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FIG. 1A

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axmi009	-----DDNRRALVTQYAIVDNFFFEKNMPKFERN-----	FEILLPLVYAQAANLHL	212
cry1Aa	---NPALREEMRIQFNDMNSALTTAIPLLAVQN-----	YQVPLLSVYVQAANLHL	169
cry1Ac	---NPALREEMRIQFNDMNSALTTAIPLFAVQN-----	YQVPLLSVYVQAANLHL	169
cry1Ca	---NPATRTVIDRFRILDGLLERDIPSFRIISG-----	FEVPLLSVYAQAANLHL	168
cry1Ia	---NTRARSVVKSQYIALELMFVQKLPSFAVSG-----	EEVPLLPPIYAQAANLHL	197
cry3Aa1	--SRNPHSQGRIRELFSQAESHFRNSMPSFAISG-----	YEVFLFTTYAQAANTHL	213
cry3Ba	--LRSRRSQDRIRELFSQAESHFRNSMPSFAVSK-----	FEVLFLPTYAQAANTHL	214
cry3Bb	--LRSKRSQDRIRELFSQAESHFRNSMPSFAVSK-----	FEVLFLPTYAQAANTHL	206
cry4Aa	---NPQNTQDVRTQIQLVHYHFQNVIPELVNSCPPNPSCDYNNILVLSSYAQAANLHL		218
cry6Aa	---DDDAIAKAIKDFKARCERDILKEAKQYEEAAKN-----	IVTSLDQ	185
cry7Aa	---DPEALLSVATEFRIIDSLEFESMPSFKVTG-----	YEIPLLTVYAQAANLHL	196
cry8Aa	---DARTRSVVSNQFIALDLNFVSSIPSFVAVSG-----	HEVLLLVAVYAQAVNLHL	207
cry10Aa	---THANAKAVHDLFTTLEPIIDKDLMLKNNAS-----	YRIPTLPAYAQIATWHL	211
cry16Aa	---STGNLSTLVTKFTALDSDFNGAIRTVNNQGS-----	GYELLLLPVYAQIANLHL	211
cry19Ba	---NFASGELIRSYINDLHILFTRDIQSDFSLG-----	GYETVLLPSYASAANLHL	201
cry24Aa	--KSNINYQTNVAEAFKTVREFFTKLKIYRTSS-----	SQITLLPTFTQAANLHL	199
cry25Aa	NPQGDSQLREAARRSLEEIERDFFKALAGEFAEAG-----	SQIVLLPIYAQAANIHL	203
cry40Aa1	Q-KTNNSDGIQLVKYFELSERDFNEILGGSILARNN-----	AQILLLPYFCASCKCQL	198

axmi009	ILLRDADYFGAQWQLGDDEIR-----	DNYIRLQGLIREYKDHCI	251	
cry1Aa	SVLRDVSFVGQRWGF-----	AATI-----	NSRYNDLTRLIGNYTDYAV	208
cry1Ac	SVLRDVSFVGQRWGF-----	AATI-----	NSRYNDLTRLIGNYTDYAV	208
cry1Ca	AILRDSVIFGERWGLT-----	TINV-----	NENYNRLIRHIDEYADHCA	207
cry1Ia	LLLRDASIFGKEWGLS-----	SSEI-----	STFYNRQVERAGDYSCHCV	236
cry3Aa1	FLLKDAQIYGEWGYE-----	KEDI-----	AEFYKRQLKLTQYTDHCV	252
cry3Ba	LLLKDAQVFGEWGYE-----	SEDI-----	AEFYQRQLKLTQYTDHCV	253
cry3Bb	LLLKDAQVFGEWGYE-----	SEDV-----	AEFYHRQLKLTQYTDHCV	245
cry4Aa	TVLNQAVKFEAYLKNN-----	RQFDY-----	LEPLPTAIDYYPVLTKAIEDYTNVC	265
cry6Aa	FLHGDQKKLEGVINI-----		KRLKEVQTALNQAHGESS	219
cry7Aa	ALLRDSTLYGDKWGFT-----	QNNI-----	EENYNRQKKRISSEYSDHCT	235
cry8Aa	LLLRDASIFGEWGF-----	PGEI-----	SRFYNRQVQLTAEYSYDVC	246
cry10Aa	NLLKHAATYINIWLQN-----	QGIN-----	PSTFNSSNYQGYLKRKIQEYTDYCI	257
cry16Aa	LLLRDAQIYGDKWWSA-----	RANA-----	RDNYQIQLEKTKEYTEYCI	251
cry19Ba	LLLRDAVAYG-KELGY-----	PSTD-----	VEFYNEQKYTEKYSNYCV	240
cry24Aa	SMLRDAVMYQEGWNLQ-----	SHIN-----	YSKELDDALEDYTNVC	236
cry25Aa	LILKDAMQFRDGLIRPVGVPITTS-----		AEDPFSEFLLRIKKYTDHCI	250
cry40Aa1	LLLRDAVQYEEQWFPF-----	LSAENVRSELISPNSGCDFTGDIYERLKCKIAEYTDYCE	253	

axmi009	TFYNQGLNQFNRSNA-----	QDWVSFNRFRTDMTLTVLDLAILFPNYDPRRYPLA----	301
cry1Aa	RWYNTGLERVWGPDS-----	RDWVRYNQFRRELTLTVLDLIALFNSYDSRRYPPIR----	258
cry1Ac	RWYNTGLERVWGPDS-----	RDWVRYNQFRRELTLTVLDLIALFNPYDSRRYPPIR----	258
cry1Ca	NTYNRGLNLPKSTY-----	QDWITYNRLRRDLTLTVLDLIAAFFPNYDNRRYPPIQ----	257
cry1Ia	KWYSTGLNLRGTNA-----	ESWVRYNQFRDMTLMVLDLIALFSPYDTQMPYPIK----	286
cry3Aa1	KWYNVGLDKLRGSSY-----	ESWVNFNRYRREMTLTVDLIALFPLYDVRLYPKE----	302
cry3Ba	NWYNVGLNSLRGSTY-----	DAWVKFNRFREMTLTVDLIVLFPFYDVRLYSKG----	303
cry3Bb	NWYNVGLNLRGSTY-----	DAWVKFNRFREMTLTVDLIVLFPFYDIRLYSKG----	295
cry4Aa	TTYKKGLNLIKTTPDSNLDGNINWNTYNTYRTKMTTAVLDLIALFNPYDVGKYPIG----		321
cry6Aa	PAHKELLEKVKNLKT-----	TLERTIKAEQDLEKKVEYSFLLGPLLGFFVYBILEN--	270
cry7Aa	KWYNSGLSRLNGSTY-----	EQWINYNRFRREMILMALDLVAVFPFHDPRRYSME----	285
cry8Aa	KWYKIGLDKLGTT-----	KSWLNYHQFRREMTLLVLDLIALFNPYDTHMYPIE----	296
cry10Aa	QTYNAGLTMIRTN-----	TNATWNMYNTYRLEMTLTVDLIALFNPYDPEKYPIG----	307
cry16Aa	NWYNKGLNDFRTAGQ-----	WVNFNRYRREMTLTVDLIIISMFPIYDARLYPT-----	298
cry19Ba	NTYKSGLESKKQIG-----	WSDFNRYRREMTLSVLDLIALFPLYDTGLYPSKDGKI	291
cry24Aa	EVYTDGLNALR--GSTAI-----	DWLEFNSFRDMTLMVLDLVAIFPNYNPVRYPLS----	286
cry25Aa	SYDDGLAKIRSRGSDG-----	ETWWEFNKFRREMTLTVDLVALYPTHNIKLYPIP----	302
cry40Aa1	YWYQAGLNQIKQAGTGAD----	TWAKFNKFRREMTLTVDLIIAIFQTYDFKKYPLP----	305

FIG. 1B

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axmi009	-VKTELTRVYTDVPVGTGVLES GGRTYPWYNPNNTTFTAMENNARRRPSYTTWLNRI FV	360
cry1Aa	-TVSQLTREIYTNPVLENFDGSGFRGMAQR-----IEQNIRQPHLMDILNSITI	305
cry1Ac	-TVSQLTREIYTNPVLENFDGSGFRGSAQG-----IERSIRSPHLM DILNSITI	305
cry1Ca	-PVGQLTRVYTDPLIN-FNPQLQSV AQLP TF-----NVMESSAIRNPHLFDILN NLT I	309
cry1Ia	-TTAQLTRVYTD AIGTVHPHPSFTSTTWYNNNA-PSFSAIEAAVVRNPHLLDFLEQVTI	344
cry3Aa1	-VKTELTRDVLTDPIVGVN NLRGYGTTFSN-----IENYIRKPHLFDYLHRIQF	350
cry3Ba	-VKTELTRDIFTDPIFTLNALQEYGP TFSS-----IENSIRKPHLFDYLRGIEF	351
cry3Bb	-VKTELTRDIFTDPIFSLNLTQEYGP TFSL-----IENSIRKPHLFDYLRGIEF	343
cry4Aa	-VQSELTREIYQVLNFEESP--YKYDFQYQ-----EDSLTRRPHLFTWLDSLNF	368
cry6Aa	-TAVQHIKNQIDEIKQLDS-----AQHDLDRDVKIIGMLNS---	306
cry7Aa	-TSTQLTRVYTD PVSLSISNPDIGPSFS-----QMENTAIRT PHLVDYLD ELYI	334
cry8Aa	-TTAQLTRDVYTDPIAFNI VTSTGFCNPWSTHSG-ILFYEVENN VIRPPH LFDILSSVEI	354
cry10Aa	-VKSELIREVYTNVNSDT-----FRITEL-----ENGLTRNPTLFTWINQGRF	350
cry16Aa	EVKTELTREIYSDVINGE IYGLMTPYFSFEKA-----ESLYTRAPHLFTWLKGF RF	349
cry19Ba	HVKAELTREIYSDVINDHVYGLMVPYISFEHA-----ESLYTRRPHAFTWLKGF RF	342
cry24Aa	-TKISLSRKIYTD PVGRDTS PSFGDWTNTGRTLA-NFN-DLREVTDS PSLVKWLGDM TI	343
cry25Aa	-TQTELSRVYTD PVGCGFN RKSDI FSLNFD-----YLENRLTRPREPFNYLNSVQL	354
cry40Aa1	-THVELTREIYTD PVGYSS----GTYSWLKYWTG-AFN-TLEANGTRGPGLVTWLR SIGI	358
:		
axmi009	YTRTLGNMS---DVRNIWGGHTLVENGNDGSEITHNFGKTDSITPIQYFN FANLSVFSIE	417
cry1Aa	YTDVHRG-----FNYWSGHQITASPVGFGS GPEFAFPLFGNAGNAAPP-VLVSLTGLG	356
cry1Ac	YTD AHRG-----YYYWSGHQIMASPVGFGS GPEFTFPLYGTMGNAAPQQRIV AQLGQG	357
cry1Ca	FTDWFSVG-----RNFYWG GHRVISSLIG--GGNITSPIYGREANQEP- RSFTFNGP-	359
cry1Ia	YSLLS--RWSNT-QYMN MWGGHKLEFRTIGGT LNISTQGSTNTSINPVT---LPFTSRD	397
cry3Aa1	HTRFQPGYYGND--SFNYWSGNYVSTRPSIGSNDIITS PFYGNKSSEPVQ--NLEFNGEK	406
cry3Ba	HTRLRPGYSGKD--SFNYWSGNYVETRPSIGSNDTITS PFYGDKSI EPIQ--KLSFDGQK	407
cry3Bb	HTRLQPGYFGKD--SFNYWSGNYVETRPSIGS SKTITS PFYGDKSTEPVQ--KLSFDGQK	399
cry4Aa	YEKAQT-----TPNNFFTSHYNM FH YTLDNISQ--KSSVFG-NHNVTDKL KSLGLATNI	419
cry6Aa	-----INTD	310
cry7Aa	YTSKYKAFSHEIQPDLFYWSAHKVSFKKSE-QSNLYTTGIYGKTSGYISS-GAYSFHGND	392
cry8Aa	NTSRGGITL NND-AYINYWSGHTLKYRR TADSTVYTANYGRITSEKNS----FALED RD	409
cry10Aa	YTRNSRDIL--DPYDIFSFTGNQMAFHTNDDRNIIWGA VHG-NIISQDTSKVFPFYRNK	407
cry16Aa	VTNSIS-----YWTFLSGGQNKYSYTN-NSSIN--EGSFRGQD TDYGGTSSTINIP S NS	400
cry19Ba	VTNSIN-----SWTFLSGGENRYFLTHGEGTIY--NGPFLGQDTEYGGTSSYIDISN NS	394
cry24Aa	YTGAIDSYRPTSPGDRIGVWYGNINAFYHTGR TDVVMFRQTGDTAYEDPSTFISN ILYDD	403
cry25Aa	FASTVSNSNN---GEVLRGNLNKIMFEGWGTASRSGDVTTGTPTFSTMDWSYGWGYP RKH	411
cry40Aa1	YNEYVSRYSFGWVGTRH-----YEDYTTGNGNFQRM SGTTSNDLRDISFPNS-----D	406
:		
axmi009	SLARIYLGGEANNYITSQYGVSRVIFNTSNIN-----NVPGSLRYEVPANLPSQ	467
cry1Aa	IFRTLSSP--LYRRIILGSGPNNQELFVL DG-----TEFSFASLT TNLPSTIYRQRGT V	408
cry1Ac	VYRTL SST--LYRRPFN-IGINNQQLSVLDG-----TEFAYG-TSSNLPSAVYRKSGTV	407
cry1Ca	VFRTL SNP--TLRLLQQPWPAPPFNLRGVEG-----VEFSTP-----TNSFTYRGRGT V	406
cry1Ia	VYRTESLAGLNLFLTQP VNGVPRVDFHWKFVT----HPIASDNFYYPGYAGIG--TQLQ	450
cry3Aa1	VYRAVANTNLAVWPS-AVYSGVTKVEFSQYN-----DQTDEASTQTYDSKRNVGAVS-W	458
cry3Ba	VYRTIANTDIAAFPDGKIYFGVTKVDFSQYD-----DQKNETSTQTYDSKRYNGYLGAQ	461
cry3Bb	VYRTIANTDVAAWPNGKVYLGVT KVDFSQYD-----DQKNETSTQTYDSKRNNGHVSAQ	453
cry4Aa	YIFLLNVISLDNKY-LNDYNNISKMDFFITNGTRLLEKELTAGSGQITYDVKNIFGLPI	478
cry6Aa	IDNLYSQGQEAIKVFQKLQGIWATIGAQIEN-----LRT	344
cry7Aa	IYRTLAAPSVVVPYTQNYGVEQVEFYGVKG-----HVHYRG-----DNKYDLTY	437
cry8Aa	IFEINSTVANLANYYYQKAYGVPGSWFH MVKRG----TSSTTAYLYSKTH TALQGCTQVY	464
cry10Aa	PIDKVEIVRHR-----EYSDIYEMIFFSN-----SSEVFRYSSNSTIENN--	448
cry16Aa	YVYNLW TENY EYIYPWGD PVNITKMNF SVTDNN-----SSKELIYGAHRTNKP VVRT	452
cry19Ba	SIYNLWTKNYEWIYPWTD PVNITKINFSITDNS-----NSSESIYGAERMNKPTVRT	446
cry24Aa	IYKLDLRAAAVSTIQGAMDTTFGVSSSRFFDIR-----GRNQLYQS-NKPYPSL	451
cry25Aa	YAEITSRSQALPGLNNSIHVIGIDSFRAIGPG-----GQGDHTFSLPGGDMYD	460
cry40Aa1	IFKIESKAIMNLVGEINARPEYRVSRAEFSEST-----AFIYLYDAGNSGLSSM	455

FIG. 1C

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axmi009	TILSELPGKDKPRPNAGDFSHRLSYISNFDARRSS--SGGIVSLTTFGWAHTSMDRNNRLE	526
cry1Aa	DSLDPVPPQDNSVPPRAGFSHRLSHVTMLSQAG--AVYTLRAPTFWSQHRSAEFNNIIP	466
cry1Ac	DSLDEIPPQNNVPPRQGFHRLSHVSMFRSGFSNSSSVSIIRAPMFSWIHRSAEFNNIIA	467
cry1Ca	DSLTELPPEDNSVPPREGYSHRLCHATFVQSRGT---PFLTGTGVVFSWTHRSATLTNTID	463
cry1Ia	DSENELPPEATGQPNYESYSHRLSHIGLISASHVK-ALVYS-----WTHRSADRTNTIE	503
cry3Aa1	DSIDQLPPETTDEPLEKGYSHQLNYVMCFLMQGSR-----GTIPVLTWTHKSVDFFNMIID	513
cry3Ba	DSIDQLPPETTDEPLEKAYSHQLNYAECFLMQDRR-----GTIPFFTWTWTHRSVDFFNMIID	516
cry3Bb	DSIDQLPPETTDEPLEKAYSHQLNYAECFLMQDRR-----GTIPFFTWTWTHRSVDFFNMIID	508
cry4Aa	LKRRENQGNPTLFPTYDNYSHILSFIKS--LSIPA--TYKTQVYTFAWTHSSVDPKNTIY	534
cry6Aa	TSLQEVQSDDDADEIQIELEDASDAWLVAQEARD-----FTLNAYSTNSRQNL	394
cry7Aa	DSIDQLPPDGE--PIHEKYTHRLCHATAIFKSTP--DYDNATIPFSWTHRSAEYNNRIY	493
cry8Aa	ESSDEIPLDRT-VPVAESYSHRLSHITSHSFSKNG-SAYYGSFPVFWWTHTSADLNNTIY	522
cry10Aa	YKRTDSYMIKPQTKWNEEYGHSTLSYIKTDNYIFSV--VRERRRVAFSWTHTSVDFQNTID	506
cry16Aa	DFDFLTNKEGTELAKYNDYNHILSYMLINGETFGQ--KRHG--YSFAFTHSSVDPNNTIA	508
cry19Ba	DFNFLNRNAGNGPTTYNDYNHILSYMLINGETFGQ--KRHG--YSFAFTHSSVDYNTIV	502
cry24Aa	PITITFPGEESSEGNANDYSHLLCDVKILQEDSSNICGRSSLLSHAWTHASLDRNNTIL	511
cry25Aa	CGKVQINPLEDYRNSDHWISDMMTINSQLASNPTQTFAFSALSLGWHSAGNRNVYV	520
cry40Aa1	TITSKLPGIKNPEPSYRDYSHRLSNAACVG-----AGNSRINVGWTHTSMSKYNLIY	508
* ;		
axmi009	PDKITQIDAVKGWGGNIG-----FVIPGPTGGNLVKVSDSWH-----SLKVQAPQRO	573
cry1Aa	SSQITQIPLTKSTNLGS--GTSVVKGPGFTGGDILRRTSPGQISTLRVNITAPL-----S	519
cry1Ac	SDSITQIPAVKGNFLFN--G-SVISGPGFTGGDLVRLNSSGNNIQRGYIEVPIHFPSTS	524
cry1Ca	PERINQIPLVKGFRVWG--GTSVITGPGFTGGDILRRTFGDFVSLQVNINSPI-----T	516
cry1Ia	PNSITQIPLVKAFNLSS--GAAVVRGPGFTGGDILRRTNTGTFGDIRVNINPPF-----A	556
cry3Aa1	SKKITQLPLVKAYKLQS--GASVVAGPRFTGGDIIQCTENG---SAATIIYVTP-DVSY	566
cry3Ba	AEKITQLPVVKAYALSS--GASIIEGPGFTGGNLLFLKESSN---SIAKFKVTLSAALL	571
cry3Bb	AEKITQLPVVKAYALSS--GASIIEGPGFTGGNLLFLKESSN---SIAKFKVTLSAALL	563
cry4Aa	THLTTQIPAVKANSLGT--ASKVVQPGHTGGDLIDFKDHFH-----ITCQHSN-FQQ	584
cry6Aa	INVIDSCNCSTTNMTS---NQYSNPTTN-----MTS	423
cry7Aa	PNKITKIPAVKMYKLDD--PSTVVKGPGFTGGDLVKRGSTGYIGDIKATVNSPL-----S	546
cry8Aa	SDKITQIPAVKGDMLYL--GGSVVQPGFTGGDILKRTNPSILGTFAVTVNGSL-----S	575
cry10Aa	LDNITQIHALKALKVSS--DSKIVKPGHTGGDLVILKDSMD-----FRVRFLKNVSR	557
cry16Aa	ANKITQIPVVKASSING--SISIEKPGFTGGDLVKMRADSG-----LTMRFKAEELD	559
cry19Ba	PDKIVQIPAVKTNLVG---ANIIKPGHTGGDLLKLEYERF-----LSLRIK-LIAS	550
cry24Aa	PDEITQIPAVTAYELR--GNSSVAGPGSTGGDLVKMSYHSV-----WSFKVY-CSEL	561
cry25Aa	YDKITQIPATKTVREHP---MIKPGFTGGDLADLSSNSDILQYDLRSDYDDR-LTED	574
cry40Aa1	PDKITQIPAVKAFFDISDTGPGQVIAGPGHTGGNVVSLPYYSR-----LKIRLIPASTN	561
*		
axmi009	TSYRIRLRVYACLVTHGDAIFVEHSGSSSHIVS-----FFDCSNSSGRPSNTLLESDFRYID	628
cry1Aa	QRYRVRIRYASTTNLQFHTSIDGRPINQG-----NFSATMSSGSNLQSGSFRTVGFTT	572
cry1Ac	TRYRVRIRYASVTPIHNLVNWGNSSIFSN-----TVPATATSLDNLQSSDFGYFESAN	577
cry1Ca	QRYRLRFYASSRDARVIVLTGAASTGVGGQVSVNMPLQKTMEIGENLTSRTFRYTDFSN	576
cry1Ia	QRYRVRIRYASTTNLQFHTSINGKAINQG-----NFSATMNRGEDLDYKTFRTVGFTT	609
cry3Aa1	QKYRARIHYASTSQITFTLSLDGAPFNQY-----YFDKTINKGDTLTYNFNLASFST	619
cry3Ba	QRYRVRIRYASTTNLRLFLVQNSNNDFLVI-----YINKTMNIDGDLTYQTFDFATSNS	624
cry3Bb	QRYRVRIRYASTTNLRLFLVQNSNNDFLVI-----YINKTMNKDDDLTYQTFDLATNS	616
cry4Aa	SYF-IRIRYASNGSANTRAVINLSIPGVAELG---MALNPTFSGTDYTNLKYKDFQYLE	639
cry6Aa	NQYMISSHEYTSLPNNFMLSRSNLEKCP-----ENNFMIIYWNNSDWYN	468
cry7Aa	QKYRVRIRYATNVSGQFNVIYINDKITLQT---KFQNTVETIGEGKDLTYGSFGYIEYST	602
cry8Aa	QRYRVRIRYASTTDFEFTLYLG-DTIEKN-----RFNKTMDNGASLTETFKFASFIT	627
cry10Aa	QYQ-VRIYATNAPKTTVFLTGIDTISVELPS---TTSRQNPATDLTYADFGYVTFPR	612
cry16Aa	KKYRVRIRYKCNYSKLIIRKWKGEYIQQI---HNISPTYGAFSY---LESFTITT	611
cry19Ba	MTFRIRIRYASNISGQMMINIGYQNTYFNII---PTTSRDYTELK-----FEDFQLVD	601
cry24Aa	KNYRVRIRYASHGNCQFLMKRWPSTGVAP-----RQWARHNVQGTFSNSMRYEAFKYLD	615
cry25Aa	VPFRIRIRCASIGVSTISVDNWGSSSPQV-----TVASTAASLDTLKYESFQYVS	624
cry40Aa1	KNYLVVRVRYTSTSNGRLLVERWSPSSIIN-----SYFFLPSTG-----PGDSFGYVD	608

FIG. 1D

Application No. 10/782,096  
Amendment Dated June 2, 2006  
Reply to Office Action of March 3, 2006  
REPLACEMENT SHEET

axmi009	VPGIFTPSINPLIRYRTQSFG-----THAIDKFEFIPLNTFPNQ-----SLEKREQEVN	677
cry1Aa	PFNFSNGSSVFTLSAHVFN-----SGNEVYIDRIEFVPAEVTFEA---EYDLERAQKAVN	624
cry1Ac	AFTSSLGN---IVGVRNFS-----GTAGVIIDRFEFIPVTATLEA---EYNLERAQKAVN	626
cry1Ca	PFSFRANPDIIGISEQPLFGAGSISSGELYIDKIEIILADATFEA---ESDLERAQKAVN	633
cry1Ia	PFSFLDVQSTFTIGAWNFS-----SGNEVYIDRIEFVPEVITYEA---EYDFEKAQEKVT	661
cry3Aa1	PFELSG--NNLQIGVTGLS-----AGDKVYIDKIEFIPVN-----	652
cry3Ba	NMGFSGDTNDFIIGAESFV-----SNEKIYIDKIEFIPVQ-----	659
cry3Bb	NMGFSGDKNELIIGAESFV-----SNEKIYIDKIEFIPVQL-----	652
cry4Aa	FSNEVKFAPNQNISLVFNRSV-VYTNTTVLIDKIEFLPITRSIREDREKQKLETVQQIIN	698
cry6Aa	NSDWYNN-----	475
cry7Aa	TIQFPDEHPKITLHLSDL-----NNSSFYVDSIEFIPVDVNYAE---KEKLEKAQKAVN	654
cry8Aa	DFQFRETQDKILLSMGDFS-----SGQEVYIDRIEFIPVDETYEA---EQDLEAAKAVN	679
cry10Aa	TVPNKTFEGEDTLLMTLYGTP-NHS-YNIYIDKIEFIPITQSVLDYTEKQNIKTQKIVN	670
cry16Aa	TENIFDLTMEVTPYGRQFVE-DIPS--LILDKIEFLPTN-----	648
cry19Ba	TSYIYSGGPSISS--NTLWLD-NFSNGPVIIDKIEFIPLGITLNAQGYDQYDQNGMY	658
cry24Aa	IFTITPEENNFAFTIDLES GG-----DLFIDKIEFIPVSGSAFEGKQNIKTQKAVN	669
cry25Aa	IPGNYYFDSAPRIRLLRQPGR-----LLVDRIEIIIPVNFPLS-----EQENKSVD	670
cry40Aa1	TLVTTTFNQPGVEII IQN-LDT-----PINVDKVEFIPVNSTALEYEGKQSLEKAQDVVN	661
axmi009	DLFIN-----	682
cry1Aa	ELFTSSNQIGLKTDTVTDYHIDQVSNLVECLSDEFCLDEKQELSEKVKHAKRLSDERNLLQ	684
cry1Ac	ALFTSTNQGLKTNVTDYHIDQVSNLVTYLSDEFCLDEKRELSEKVKHAKRLSDERNLLQ	686
cry1Ca	ALFTSSNQIGLKTDTVTDYHIDQVSNLVDCLSDEFCLDEKRELSEKVKHAKRLSDERNLLQ	693
cry1Ia	ALFTSTNPRGLKTDVKDYHIDQVSNLVESLSDEFYLDEKRELFEIVKYAKQLHIERNM--	719
cry3Aa1	-----	
cry3Ba	-----	
cry3Bb	-----	
cry4Aa	TFYANPIKNTLQSELTDYDIDQAAANLVECI SEELYPKEKMLLLDEVKNAKQLSQSRNVLQ	758
cry6Aa	-----	
cry7Aa	TLFTE-GRNALQKDVTDYKVDQVSILVDCISGDLYPNEKRELQNLVKYAKRLSYSRNLLL	713
cry8Aa	ALFTNTKD-GLRPGVTDYEVNQAAANLVECLSDDLYPNEKRLLF DAVREAKRLSGARNLLQ	738
cry10Aa	DLFVN-----	675
cry16Aa	-----	
cry19Ba	HQNYSNSGYNYNQEYNTYYQSYNN-----	682
cry24Aa	DLFIN-----	674
cry25Aa	SLFIN-----	675
cry40Aa1	DLFVK-----	666

FIG. 1E